Mr. Cates/jm

XX/X

[redacted]

Vitale 1112

CLASSIFICATION CHANGED TO [redacted] BY AUTH OF AFR 205-2 8 APR 1966

[redacted]

[redacted] AFB CALIF

AF SPACE SYSTEMS DIVISION LOS ANGELES CALIF

[redacted] SUNNYVALE CALIF

LOCKHEED MISSILE & SPACE COMPANY SUNNYVALE CALIF

LOCKHEED MISSILE & SPACE COMPANY VANDENBERG AFB CALIF /COURIER/ ZIEL

[redacted] AFB CALIF /COURIER/ ZIEL

[redacted] AFB CALIF /COURIER/ ZIEL

[redacted] AFB CALIF /COURIER/ ZIEL

[redacted] AFB FLORIDA

[redacted]

[redacted] FOR COL MOORE SEXCLN LMSC/ [redacted] FOR [redacted] DEBFORE/ SEXCLN LMSC/VAFB FOR DEPT 63-44 SEXCLN LMSC/VAFB FOR MR. HECKMAN. DUFO CLN 1

30 1845

DOWNGRADED AT 3 YEAR INTERVALS; DECLASSIFIED AFTER 12 YEARS DOD DIR 5200.10

V WZAD Official File Cy

OFFICE SYMBOL	ORIGINATOR			ALC 61
NAME (SIGNATURE)		[redacted]		
DATE	Charles A. Yuhas, Major, USAF		LUCIEN A. PERRY, JR., Colonel, USAF	

AFBMD Form 11
1 Nov 59

COORDINATION SHEET

Replaces AFBMD Form 11, 1 Jun 59

[redacted]

[redacted] TO WASHINGTON AFB CALIF

[redacted] ATLAS ARSENAL INF FOR GUIDANCE TEST AND DOPPLER SIMULN

[redacted] SUBJ/ VFTR /AE. FIRST/LINCOLN SUBJ/ FOR COL WEHALL.

[redacted] CIR FLASH REPORT OF THE LAUNCHING OF DISCOVERER

[redacted] SATELLITE (FIRST FLIGHT).

1. [redacted] AT [redacted] EASTERN DAYLIGHT TIME ON THE 10TH INSTANT, ATLAS VEHICLE NO. 109 AND AGENA A SPACECRAFT NO. 1115, WAS LAUNCHED FROM VAFB COMPLEX 75-3 PAD 4 AT A MEAN AZ OF 7 DEG ON 10 AUGUST 1960. THE PRIMARY LAUNCH OBJECTIVE, TO PLACE THE DISCOVERER SATELLITE WITH PAYLOAD IN A NEAR-POLAR ORBIT, WAS ACCOMPLISHED. THE VFTR PLOTBOARD PRESENTATION OF ASCENT TRACKING DATA INDICATED THE INJECTION ALTITUDE TO BE 165 STATUTE MILES, THE INJECTION VELOCITY TO BE 25,600 FPS, AND THE INJECTION FLIGHT PATH ANGLE TO BE PLUS 1 DEGREE. THE TRACKING STATIONS AT KODIAK AND HAWAII RECEIVED THE SATELLITE TELEMETRY AND RADAR BEACON SIGNALS ON THE FIRST ORBIT PASS.

2. PRELIMINARY EVALUATION INDICATES THAT LAUNCH TEST OBJECTIVES WERE ACHIEVED AS FOLLOWS /REFERENCE DETAILED TEST OBJECTIVE, LMSD 444[illegible] SECTION 2/ CJR

A. DISCOVERER BOOSTER - OBJECTIVE ACHIEVED.

/1/ VEHICLE IGNITION WAS WITHIN 5 NAUTICAL MILES, FLIGHT PATH ANGLE WAS WITHIN 4 DEGREES, AND VELOCITY WAS

[redacted]

FWZD [redacted]

[redacted]

[illegible] VANDENBERG AFB CALIF

WITHIN [illegible] PCT OF THE NOMINAL VALUES AT BOOSTER ENGINE CUT-OFF. BOOSTER STEERING AND EVENT COMMANDS APPEAR TO HAVE BEEN SATISFACTORILY GENERATED AND TRANSMITTED BY THE [illegible] GUIDANCE SYSTEM, AND VEHICLE RESPONSE TO THE COMMANDS APPEARS TO HAVE BEEN PROPER. BECO OCCURRED AT T PLUS 1[illegible] SECONDS ON COMMAND FROM GROUND GUIDANCE. VECO OCCURRED AT T PLUS 1[illegible] SECONDS AFTER 9.0 SECONDS OF VERNIER SOLO OPERATION. SEPARATION OF THE ORBITAL STAGE FROM THE BOOSTER WAS INITIATED AT T PLUS 16[illegible] SECONDS BY A GROUND GUIDANCE COMMAND.

(U) 20 CPS OSCILLATIONS WERE APPARENT IN THE AGENA LONGITUDINAL ACCELEROMETER DATA INTERMITTENTLY AND WITH LOW AMPLITUDE FROM LIFTOFF TO T PLUS 137 SECONDS. THE AMPLITUDE OF THE OSCILLATIONS INCREASED AFTER T PLUS 137 SECONDS TO A MAXIMUM PEAK-TO-PEAK VALUE OF APPROXIMATELY 2.1 G AT T PLUS 140 SECONDS. THE AMPLITUDE DECREASED THEREAFTER UNTIL BECO. LOW AMPLITUDE OSCILLATIONS WERE ALSO APPARENT IN THE [illegible] MAIN ENGINE CHAMBER PRESSURE DATA BETWEEN T PLUS 140 SECONDS AND T PLUS 145.3 SECONDS.

B. AGENA AIRFRAME AND ADAPTER. - OBJECTIVE ACHIEVED

NO EVIDENCE OF STRUCTURAL PROBLEMS IN THE AGENA AIRFRAME OR ADAPTER HAS BEEN NOTED.

[redacted]

[redacted]

[illegible] CALL

C. AGENA PROPULSION SYSTEM - OBJECTIVE ACHIEVED

THE AGENA ENGINE PROVIDED THE THRUST NECESSARY FOR ORBITAL STAGE INJECTION. AGENA ENGINE IGNITION OCCURRED IN A NORMAL MANNER AT T PLUS [illegible] SECONDS. ENGINE OPERATION APPEARS TO HAVE BEEN SATISFACTORY THROUGH SHUTDOWN WHICH WAS COMMANDED BY THE INTEGRATOR AT T PLUS [illegible] SECONDS. THE INCREMENTAL VELOCITY GAIN INDICATED BY THE INTEGRATOR DURING ORBITAL STAGE BOOST WAS [illegible] FPS. THE IMPULSE PROVIDED BY THE AGENA ENGINE WAS SUFFICIENT TO GIVE THE VEHICLE ORBITAL VELOCITY AT THE PROPER INJECTION ALTITUDE.

D. AGENA ELECTRICAL POWER SYSTEM - OBJECTIVE ACHIEVED.

NO EVIDENCE OF AGENA ELECTRICAL POWER SYSTEM PROBLEMS HAS BEEN NOTED.

E. AGENA GUIDANCE AND FLIGHT CONTROL SYSTEM - OBJECTIVE ACHIEVED.

/1/ THE AGENA GUIDANCE SYSTEM PROPERLY RESPONDED TO A [illegible] SECOND TIME-TO-FIRE CORRECTION AND A [illegible] SECOND VELOCITY-TO-BE-GAINED CORRECTION AS COMMANDED BY THE GROUND GUIDANCE SYSTEM. VEHICLE ATTITUDE WAS APPARENTLY CONTROLLED SATISFACTORILY DURING THE COAST PHASE AND DURING THE ORBITAL BOOST PHASE, AND CONTROL GAS EXPENDITURE WAS

[redacted]

[illegible] APS CALT

NORMAL DURING THESE PERIODS. ENGINE SHUTDOWN WAS PROPERLY COMMANDED BY THE INTEGRATOR, AND THE TIME AND SEQUENCE OF ALL PROGRAMMED EVENTS THAT OCCUR DURING ASCENT [illegible] WERE PROPERLY CONTROLLED BY THE [illegible].

AN INVESTIGATION IS CONTINUING TO DETERMINE THE REASON FOR THE [illegible] ALTITUDE AND FLIGHT PATH ANGLE.

F. AGENA SPACE COMMUNICATIONS SYSTEM - OBJECTIVE ACHIEVED.

OPERATION OF BOTH THE RADAR BEACON AND THE ACQUISITION BEACON WAS SATISFACTORY. WE TRACKED THE RADAR BEACON FROM LIFTOFF TO T PLUS [illegible] SECONDS AND THE ACQUISITION BEACON FROM LIFTOFF TO T PLUS [illegible] SECONDS.

G. AEROSPACE GROUND EQUIPMENT - OBJECTIVE ACHIEVED.

BOOSTER AND [illegible] STAGE CHECKOUT WAS SATISFACTORILY ACCOMPLISHED DURING THE COUNTDOWN BY THE AEROSPACE GROUND EQUIPMENT, AND NO SIGNIFICANT AGE PROBLEMS WERE ENCOUNTERED.

H. [illegible] SYSTEM FACILITIES - OBJECTIVE ACHIEVED.

THE AGENA TELEMETRY SIGNAL WAS RECEIVED AND

[redacted]

[illegible] APPEARED NORMALLY

RECORDED BY THE [illegible] LIFTOFF TO T PLUS 600 SECONDS AND GOOD FLIGHT DATA RECORDS HAVE BEEN PRODUCED FOR THE PERIOD FROM LIFTOFF TO T PLUS 600 SECONDS. THE [illegible] VERLORT PROVIDED GOOD ANALOG AND DIGITAL DATA RECORDS FROM LIFT-OFF TO LOSS OF TRACK AT T PLUS [illegible] SECONDS. STATION COMMUNICATIONS DURING THE LAUNCH OPERATION WERE ADEQUATE.

3. PRELAUNCH COUNTDOWN

THE PRELAUNCH COUNTDOWN WAS ACCOMPLISHED WITH NO SIGNIFICANT PROBLEMS AND NO HOLDS. THE COUNTDOWN STARTED AT [illegible] PDT AND TERMINAL COUNTDOWN STARTED AT [illegible] PDT.

4. PAD DAMAGE.

PAD DAMAGE WAS LIGHT AND A NORMAL RECOVERY SCHEDULE IS EXPECTED.

GP-4.

[redacted]

YW2D